

Qualitative analysis of critical moments in basketball

Rafael M. Navarro*, Miguel A. Gómez**, Jorge Lorenzo** and Sergio Jiménez***

QUALITATIVE ANALYSIS OF CRITICAL MOMENTS IN BASKETBALL

KEY WORDS: Coaches's interview, Critical moments, Basketball.

SUMMARY: The aim of this paper was to know the coach point of view about the critical moment concept in basketball. The methodology used in our research is a qualitative methodology. The instrument used to obtain the data was the semi- structured interviews. There were interviewed 12 ACB league coaches during the 2011/12 season. Results show that incertitude is associated to the critical moment concept. Last minutes of close games and also overtime are identified as critical moment of the game. There is not any variable in statistics considered by all coaches to determine the critical moment, and they were agree that respecting some game rules is basic to face up the critical moment.

Moments that contribute more decisively in winning or losing are called critical moments (Sampaio, Ferreira, Ibáñez and Ribeiro, 2004). Regarding many views of critical moment's analysis in basketball, it is outstanding the coach's point of view (Ferreira, 2006). Then, for example Vallerand, Colavecchio, and Pelletier (1988), Taylor and Demick (1994), Burke, Edwards, Weigand and Weinberg (1997) and Ferreira (2006), base their researches on coach consultation, considering coach's concepts, methodology and experience.

Lima (2000) highlights the close coach performance, before, during and after the competition. Teodorescu (1984), determines that in every main stage the coach's decision is essential to face the game successfully. Pajares (1992), says coach's knowledge is a result of episodes of thought and the interpretation of intense experiences. Bar Eli and Tenenbaum (1989), show the coach's figure as a key to face stress moments and give an advice list based on psychological techniques. As Ferreira (2006) argued, the coach should think on the basketball game constraints. So, the coach's thought is very important for the whole game understanding.

Up to now, most of the critical moment's researches, have had a main aim, either analysing performance in competition, trying to state the variables that better discriminated winning and losing teams in critical moment, or have intended to analyse the player's state (Bar Eli and Tractinsky, 2000; Burke et al., 1997; Ferreira, 2006; Kaminsky, 1990; Kozar et al., 1994; Ribeiro and Sampaio, 2003; Sampedro and Prieto, 2012; Taylor and Demick, 1994).

That is why we try to state another approach to the study of critical moment based on the interview to one of the main

character of the game, the coach. The aim of this study was to analyze the critical moment from the perspective of the coach, based on the definition, location and variables.

Method

In our research it was used qualitative methodology. And the semi-structured interview was the instrument to obtain the data (Patton, 2002). The sample has been composed of 12 coaches training in ACB league during the 2011/12 season. From the total of 18 ACB coaches, 6 of them didn't show an interest in the research. The most important is the potential that every interviewed coach has to contribute to find the clue's research. (Taylor and Bogdan, 1996).

The design of the interview was conducted using the following process (Jiménez et al., 2009): a) At first it was designed the interview protocol, which was revised by experts; b) then was obtained the final protocol; c) interviews were done, and finally the transcription and codification of interviews.

The analysis of the interviews was realized considering the grammatical criteria, according to Rodríguez et al. (1996). The selected unit of meaning was the sentence, we have found 173 units of meaning. These units of meaning were reviewed for clustering them around labels, then around properties and finally around categories.

The reliability of the analysis has been established by an independent expert from the classification of a random sample of the participants' answers.

From each category we have selected the more representative properties in which all participants agree.

Correspondence: Rafael M. Navarro Barragán Calle Playa de Zarauz, nº 22- 2º B. 28042. Madrid. E-mail: rnavabar@uax.es

* Universidad Alfonso X El Sabio.

** Universidad Politécnica de Madrid.

*** Universidad Europea de Madrid.

– Artículo invitado con revisión

	CM Concept Uncertainty/Crowd	CM Concept Psychology/Sensation	CM Localization End of game	CM Variable Game philosophy	
C1	4	3	3	1	11
C2	2	6	2	1	11
C3	2	1	3	2	8
C4	1	5	1	6	13
C5	1	14	2	4	21
C6	4	6	2	11	23
C7	1	8	1	3	13
C8	4	7	1	4	16
C9	2	3	2	4	11
C10	7	5	4	6	22
C11	6	9	1	2	18
C12	1	1	1	3	6
	35	68	23	47	173

Table 1. Categorization of critical moment concept.

Results

Associated with the definition of critical moment, all coaches admit that is a difficult concept to explain and that is tied to the uncertainty that characterizes the game of basketball, also, all agree about there can be many critical moments in a game.

I think there is always a special situation that you can call a critical moment. The bad aspect about this is you never know when it will happen. I believe basketball is an action and reaction sport, and if you have that ability to react as soon as possible in view of an event, to change the defense, substitute a player or a player making a decision, that is the important moment; the critical moment (Coach 1).

There are many critical moments in a game, for me, you need to be very alert, because the game could be broken at any time, and it depends on each team's reactivity (Coach 5).

All coaches highlight the importance of feelings as a result of their experiences in the game, and the psychological factor as the key to face the critical moment successfully.

I think the most important is the player psychological capacity..., I was lucky to train P, late in his career, and his attitude was the key in this kind of situations. And then, analyzing other players, you realize that those with the most aggressiveness and ambition... that mentality is what finally allows players with similar or even lower physical and technical capacity to get further (Coach 7).

I wish the team, in that moment, had reactivity (Coach 11).

In terms of location, all coaches agree that the end of the fourth quarter in a close game is one of the obvious locations.

If you reach the end, point up, point down, the critical moment is that instant that can be decided in 5 seconds (Coach 10).

At the same time they recognize that the overtime is a critical moment itself.

You can also interpret that the five minutes of overtime are critical and you have to choose your players carefully to reach the end properly. It all depends on the way you feel the game, if you have been losing you are the team in the ascendancy... the opposing team will feel that the next moment is critical. The first minutes are critical (Coach 12).

There is no variable in conventional statistics that all coaches

recognize as a key to winning or losing the critical moment, however, all agree about not giving up their own game philosophy in those critical moments.

When a team has a fiery playing concept and it remains firm in that concept, and that playing concept is notable, the team transmits light and sparkles in action. Teams do not universally share an objective, and in my opinion, I think this has to do with idiosyncrasy within each group (Coach 7).

Discussion

One of our research's result is the difficulty associated with the study of the concept of critical moment, in addition that many critical moments can occur during the game. Uncertainty, subjectivity and interdependence are the concepts associated with the notion of critical moment in the game (Ferreira, 2006). Each subject faces a critical moment as a self-perception (Cornelius, Silva III, Conroy and Petersen, 1997; Taylor and Demick, 1994). Each game may present many critical moments, taken as time instants, they are considered as a sequence in which these disturbances are found, showing the ruptures of the dynamic course of the game (Bar-Eli and Tractinsky, 2000).

Another obtained result has been the importance that coach gives to sensations and psychological aspects based on experience in order to face up that critical moments.

The stress the player reaches in the last 5 minutes of game, in which the critical moments are detected in close games (Bar-Eli and Tractinsky, 2000; Ferreira, 2006; Kaminsky, 1990; Kozar et al., 1994; Ribeiro and Sampaio, 2003), as a result of the psycho-physiological alterations that arise from the competitive requirements, can unleash in a "state of psychological crisis" (Bar-Eli and Tractinsky, 2000). The above mentioned state is characterized by the decrease on the performance of the player. Experience, knowing your players and the competition itself, contribute to know the starting process of critical moment, and therefore to predict and guide us in facing this situation (Ferreira, 2006).

Our results also have revealed that all coaches agree about pointing out the last minutes of play as critical moments, also the entire the overtime. The last five minutes in close games have

Critical moments in basketball

been studied as a critical moment in a game (Bar Eli and Tractinsky, 2000; Ferreira, 2006; Kaminsky, 1990; Kozar et al., 1994; Ribeiro and Sampaio, 2003), that is the reason why overtime is considered as critical moment (Bar-Eli and Tractinsky, 2000). Bar-Eli and Tenenbaum (1989), suggested working with players imagining hypothetic scenes that resemble real situations of competition, so that players are able to self-manage their stress and get over the "psychological crisis".

All coaches agree that it is within the critical moment when

you have to remain faithful to the team philosophy. Silva et al., (1988) and Richardson et al., (1988), hold experience is critical for both the player and coaches to achieve success in competition, then the coach must consider three points: a) at the end of the game, the expert players to be the main characters, b) that these experts should get as refreshed as possible both physically and psychologically at the final of the game, and c) that the coach should transmit calm to his players according to the idiosyncrasy of the team.

ANÁLISIS CUALITATIVO DE LOS MOMENTOS CRÍTICOS EN BALONCESTO

PALABRAS CLAVE: Entrevistas a entrenadores, Momentos críticos, Baloncesto.

RESUMEN: El objetivo del presente artículo ha sido conocer el punto de vista que tiene el entrenador sobre el concepto de momento crítico en baloncesto. Para ello, se ha realizado una investigación cualitativa, utilizando como técnica de investigación la entrevista semi-estructurada. Se entrevistaron a 12 entrenadores que militaban en la liga ACB (Asociación de Clubes de Baloncesto) durante la temporada 2011/12. Los resultados indican que la muestra reconoce el factor de incertidumbre asociado al concepto de momento crítico. Se identifican los últimos minutos de partidos equilibrados como momento crítico del juego, así como también el tiempo extra dada su naturaleza. Al mismo tiempo, se encuentra que no hay ninguna variable que recoja la estadística convencional en la que coinciden todos los entrenadores como clave para poder determinar el momento crítico y sí coinciden en ser fieles a unos principios de juego como elemento fundamental para poder afrontar ese momento crítico.

ANÁLISE QUALITATIVA DOS MOMENTOS CRÍTICOS NO BASQUETEBOL

PALAVRAS-CHAVE: Entrevistas a treinadores, Momentos críticos, Basquetebol.

RESUMO: O objetivo deste trabalho foi conhecer o ponto de vista que o treinador relativamente ao conceito de momento crítico no basquetebol. Para este fim, realizou-se uma investigação qualitativa, utilizando como técnica de investigação a entrevista semi-estruturada. Foram entrevistados 12 treinadores que militavam na liga ACB (Associação de Clubes de Basquetebol), durante a temporada 2011/12. Os resultados indicam que a amostra reconhece o factor de incerteza associado ao conceito de momento crítico. Identificam-se os minutos finais de jogos equilibrados como momento crítico do jogo, bem como o tempo extra dada a sua natureza. Nenhuma das variáveis consideradas pelos treinadores determina os momentos críticos e todos concordam que algumas regras são essenciais para enfrentar os mesmos.

References

- Bar-Eli, M. and Tenenbaum, G. (1989). Game Standings And Psychological Crisis In Sport: Theory And Research. *Canadian Journal Of Sport Sciences*.
- Bar-Eli, M. and Tractinsky, N. (2000). Criticality of game situations and decision making in basketball: An application on performance crisis perspective. *Psychology of Sports and Exercise*, 1, 27-39.
- Burke, K., Edwards, C., Weigand, D. and Weinberg, R. (1997). Momentum in Sport: A Real or Illusionary Phenomenon for Spectators. *International Journal of Sport Psychology*, 28, 79-96.
- Cornelius, A., Silva III, J., Conroy, D. and Petersen, G. (1997). The Projected Performance Model: Relating Cognitive And Performance Antecedents Of Psychological Momentum. *Perceptual and Motor Skills*, 84, 475-485.
- Jiménez, S., Borrás, P. J. and M. Á. Gómez. (2009). *Revista Psicología del Deporte*, 18, 303-307.
- Kaminsky, J. (1990). *Critical game time periods in relation to team success in college basketball*. Unpublished Master Thesis, Kent State University, Kent.
- Kozar, B., Vaughn, R. E., Whitfield, K. E., Lord, R. H. and Dye, B. (1994). Importance of free-throws at various stages of basketball games. *Perceptual and Motor Skills*, 78(1), 243-248.
- Lima, T. (2000). *Saber Treinar, Aprende-se!* Lisboa: Centro de Estudos E Formação Desportiva.
- Pajares, M. (1992). Teachers' Beliefs And Educational Reaseach: Cleaning Up A Messy Construct. *Educational Research Review*, 62, 307-332.
- Patton, M. (2002). *Qualitative Evaluation and Research Methods (3rd ed)*. Newbury Park, CA: Sage Publications.
- Ribeiro, C. and Sampaio, A. (2003). *Abordagem Preliminar à Identificação e Caracterização dos Momentos Críticos nos Jogos de Basquetebol*. Comunicación presentada en el II Congreso Ibérico de Baloncesto - Propuestas Para la Mejora en el Proceso de Formación y Rendimiento en Baloncesto, Cáceres.
- Richardson, P., Alder, W. and Hanks, D. (1988). Game, set, match: Psychological momentum in tennis. *The Sport Psychologist*, 2, 69-76.
- Rodríguez, G., Gil, J. and García, E. (1996). *Metodología de la investigación cualitativa*. Málaga: Ajilbe.
- Sampaio, J., Ferreira, A. P. Ibáñez, S. and Ribeiro, C. (2004). Success in the last 5 minutes of basketball close games: investigating final outcome of ball possession, duration of ball possession, number of players' involved, defensive opposition and court location. *Proceedings of the World Congress of performance Analysis in Sport 6, Belfast*.
- Sampedro, J. and Prieto, J. (2012). El efecto de marcar primero y la ventaja de jugar en casa en la liga de fútbol y en la liga de fútbol sala de España. *Revista de Psicología del Deporte*, 21(2), 301-308.
- Silva III, J., Hardy, C. and Crace, R. (1988). Analysis of psychological momentum in intercollegiate tennis. *Journal of Sport and Exercise Psychology*, 10, 346-354.
- Taylor, S. J. and Bogdan, R. (1984). *Introduction to qualitative research methods: The search for meanings*. New York: John Wiley and Sons.
- Taylor, J. and Demick, A. (1994). A Multidimensional Model Of Momentum In Sport. *Journal Of Applied Sport Psychology*, 6, 51-70.
- Teodorescu, L. (1984). *Problemas de Teoria e Metodologia nos Jogos Desportivos*. Lisboa: Livros Horizonte.
- Vallerand, R., Colavecchio, P. and Pelletier, L. (1988). Psychological Moment And Performance Inferences: A Preliminary Test Of The Antecedents-Consequences Psychological Moment Model. *Journal Of Sport and Exercise Psychology*, 10, 92-108.